

an electrode provided over each of said substrates for applying an electric field to said ferroelectric liquid crystal; and

an orientation film provided over one of said substrates,

wherein said liquid crystal layer does not have memory characteristic, and

wherein said grain comprising said resin is provided between liquid crystal molecules of said liquid crystal layer which are adjacent to each other.

32. (Amended) A liquid crystal device comprising:

a pair of substrates;

a liquid crystal layer comprising a ferroelectric liquid crystal provided between said substrates, said liquid crystal layer not having a helical structure of said ferroelectric liquid crystal between said substrates;

a grain comprising a resin;

an electrode provided over each of said substrates for applying an electric field to said ferroelectric liquid crystal; and

an orientation film provided over one of said substrates,

wherein said liquid crystal layer does not have bistability, and

wherein said grain comprising said resin is provided between liquid crystal molecules of said liquid crystal layer which are adjacent to each other.

33. (Amended) A liquid crystal device comprising:

a pair of substrates;

a liquid crystal layer comprising a antiferroelectric liquid crystal provided between said substrates, said liquid crystal layer not having a helical structure of said antiferroelectric liquid crystal between said substrates;

a grain comprising a resin;

an electrode provided over each of said substrates for applying an electric field to said antiferroelectric liquid crystal; and

an orientation film provided over one of said substrates,

D1
(continued)

D1 (concluded)

wherein said liquid crystal layer does not have memory characteristic, and
wherein said grain comprising said resin is provided between liquid crystal molecules
of said liquid crystal layer which are adjacent to each other.

49. (Amended) The device of claim 31 wherein said liquid crystal device is an active matrix type.

D2

50. (Amended) The device of claim 32 wherein said liquid crystal device is an active matrix type.

51. (Amended) The device of claim 33 wherein said liquid crystal device is an active matrix type.

Sub 2

55. (Amended) A liquid crystal device comprising:
a pair of substrates;
a liquid crystal layer comprising a ferroelectric liquid crystal provided between said substrates, said liquid crystal layer not having a helical structure of said ferroelectric liquid crystal between said substrates;
a grain comprising a resin;
an electrode provided over each of said substrates for applying an electric field to said ferroelectric liquid crystal;
an orientation film provided over one of said substrates; and
a spacer provided between said substrates,
wherein said liquid crystal layer does not have memory characteristic, and
wherein said grain comprising said resin is provided between liquid crystal molecules of said liquid crystal layer which are adjacent to each other.

56. (Amended) A liquid crystal device comprising:
a pair of substrates;

a liquid crystal layer comprising an antiferroelectric liquid crystal provided between said substrates, said liquid crystal layer not having a helical structure of said antiferroelectric liquid crystal between said substrates;

a grain comprising a resin;

an electrode provided over each of said substrates for applying an electric field to said antiferroelectric liquid crystal;

an orientation film provided over one of said substrates;

a spacer provided between said substrates,

wherein said liquid crystal layer does not have memory characteristic, and

wherein said grain comprising said resin is provided between liquid crystal molecules of said liquid crystal layer which are adjacent to each other.

67. (Amended) A liquid crystal device comprising:

a pair of substrates;

a liquid crystal layer comprising a ferroelectric liquid crystal provided between said substrates, said liquid crystal layer not having a helical structure of said ferroelectric liquid crystal between said substrates; and

a grain comprising a resin;

a pixel comprising a transparent pixel electrode provided between said substrates,

wherein transmitted light amount of said pixel takes a halftone without occurrence of a domain, and

wherein said grain comprising said resin is provided between liquid crystal molecules of said liquid crystal layer which are adjacent to each other.

68. (Amended) A liquid crystal device comprising:

a pair of substrates;

a liquid crystal layer comprising a ferroelectric liquid crystal provided between said substrates, said liquid crystal layer not having a helical structure of said ferroelectric liquid crystal between said substrates; and

a grain comprising a resin;
a plurality of pixels each comprising a transparent pixel electrode provided between said substrates,
wherein transmitted light amount of each of said pixels takes a halftone throughout an entire surface of the corresponding transparent pixel electrode, and
wherein said grain comprising said resin is provided between liquid crystal molecules of said liquid crystal layer which are adjacent to each other.

69. (Amended) A liquid crystal device comprising:

a pair of substrates;
a liquid crystal layer comprising an antiferroelectric liquid crystal provided between said substrates, said liquid crystal layer not having a helical structure of said antiferroelectric liquid crystal between said substrates; and
a grain comprising a resin;
a plurality of pixels each comprising a transparent pixel electrode provided between said substrates,
wherein transmitted light amount of each of said pixels takes a halftone without occurrence of a domain, and
wherein said grain comprising said resin is provided between liquid crystal molecules of said liquid crystal layer which are adjacent to each other.

70. (Amended) A liquid crystal device comprising:

a pair of substrates;
a liquid crystal layer comprising an antiferroelectric liquid crystal provided between said substrates, said liquid crystal layer not having a helical structure of said antiferroelectric liquid crystal between said substrates; and
a grain comprising a resin;
a plurality of pixels each comprising a transparent pixel electrode provided between said substrates,

D3 (concluded)

wherein transmitted light amount of each of said pixels takes a halftone throughout an entire surface of the corresponding transparent pixel electrode, and

wherein said grain comprising said resin is provided between liquid crystal molecules of said liquid crystal layer which are adjacent to each other.

Sub E5
D4

109. (Amended) A liquid crystal device comprising:

- a pair of substrates;
- a liquid crystal layer comprising a ferroelectric liquid crystal provided between said substrates;
- a grain comprising a resin;
- an electrode provided over each of said substrates for applying an electric field to said ferroelectric liquid crystal; and
- an orientation film provided over one of said substrates,

wherein said grain comprising said resin is provided between liquid crystal molecules of said liquid crystal layer which are adjacent to each other, and

wherein transmitted light amount of said liquid crystal layer continuously varies in response to voltage applied to said liquid crystal layer.

115. (Amended) The device of claim 109 wherein said liquid crystal device is an active matrix type.

D5
Sub E4

116. (Amended) A method for forming a liquid crystal device comprising:

- forming an orientation film over one of a pair of substrates each having an electrode;
- rubbing said orientation film;
- disposing said substrates to oppose said substrates to each other;
- injecting a mixture comprising a liquid crystal material and an uncured resin between the opposed substrates after said rubbing; and
- curing said uncured resin after said injecting to provide a cured resin between said liquid crystal material and said orientation film,

wherein said liquid crystal device comprises a pixel whose transmitted light amount takes a halftone.

117. (Amended) A liquid crystal device comprising:

a pair of substrates;

a liquid crystal layer comprising a ferroelectric liquid crystal provided between said substrates,

an electrode provided over each of said substrates;

an orientation film provided over each of said substrates; and

a grain comprising a resin,

wherein said ferroelectric liquid crystal does not have helical structure between said substrates,

wherein said ferroelectric liquid crystal does not produce domain, and

wherein transmitted light amount of said liquid crystal layer continuously varies in response to voltage applied to said liquid crystal layer, and

wherein said grain comprising said resin is provided between liquid crystal molecules of said liquid crystal layer which are adjacent to each other.

REMARKS

Applicants wish to thank the Examiner for the very thorough consideration given the present application. The Office Action of **December 6, 2000** has been received and its contents carefully noted. Filed concurrently herewith is a *Request for a Two (2) Month Extension of Time* that extends the shortened statutory period for response to **May 6, 2001 (Sunday)**. Accordingly, Applicants respectfully submit that this response is timely filed.

Claims 31-117 were pending in the present application prior to the aforementioned amendment, with claims 99-108 being withdrawn from consideration as being directed to a non-elected invention. The Examiner's attention is directed to the *Amendment and Response to Restriction Requirement* filed on August 1, 2000, in which claims 100-105 were canceled. By the above actions, claims 34-37, 40-45, 52-54, 59-64, 71-82, 95-98 and 111-114 have been canceled and